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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,070

01/20/2004

Kenji Sunami

2018-832

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23117

7590

01/29/2007

NIXON & VANDERHYE, PC

901 NORTH GLEBE ROAD, 11TH FLOOR

ARLINGTON, VA 22203

EXAMINER

NORTON, JENNIFER L

ART UNIT

PAPER NUMBER

2121

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/759,070	<b>Applicant(s)</b> SUNAMI, KENJI	
	<b>Examiner</b> Jennifer L. Norton	<b>Art Unit</b> 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 and 30 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The following is a **Final Office Action** in response to the Amendment received on 30 October 2006. Claims 1, 4-6 and 8 been amended. Claims 9-22 have been newly added. Claims 1-22 are pending in this application.

#### ***Drawings***

2. The amendment to the Specification was received on 30 October 2006. The corrections to the Specification are acceptable and the objection to the Drawings is withdrawn.

#### ***Specification***

3. The amendment to the Specification was received on 30 October 2006. The corrections to the Specification are acceptable and the objection is withdrawn.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,980,081 (hereinafter Watari).

1. As per claim 1, Watari discloses an electronic control unit comprising a first computer and a second computer and outputting a control signal for an object of control based on a predetermined detection signal, the first computer (col. 3, lines 41-44 and Fig. 1, element 20) comprising:

an operation routine unit operable to operate the control signal on the predetermined detection signal (col. 2, lines 2-6) in accordance with a logic function (col. 4, lines 1-5 and 59-67);

a determination routine unit (col. 2, lines 43-46, i.e. processing unit) operable to, in order to check an abnormal state of the logic function (col. 13, lines 40-45), operate a dummy control signal by using dummy data stored in advance (col. 1, lines 61-62 and col. 2, lines 6-10) in accordance with the logic function (col. 1, lines 62-64) and to determine whether or not a relationship between the dummy control signal and an expected value of the dummy control signal, which expected value is stored with respect to the dummy data in advance, is normal (col. 2, lines 43-46); and

a transmission unit operable to transmit the dummy control signal and the expected value thereof that are used in a determination routine by the determination routine unit to the second computer (It is inherent to peer/peer communication that the device will have a component to transfer information.);

the second computer (col. 3, lines 51-53 and Fig. 1, element 30) comprising:  
a receiving unit operable to receive the dummy control signal and the expected value thereof (col. 4, lines 24-29 and col. 5, lines 57-62); It is inherent to peer/peer communication that the device will have a component to received information.); and

a monitor routine unit operable to compare the dummy control signal and the expected value thereof received by the receiving unit so as to perform a calculation routine for calculating monitor data for monitoring whether or not a result of the determination routine by the determination routine unit is correct (col. 6, lines 16-28 and col. 7, lines 1-10);

the electronic control unit further comprising:

a fail-safe routine unit operable to perform a fail-safe routine based on the determination result by the determination routine unit and the monitor data by the monitor routine unit (col. 8, lines 3-6 and lines 57-65).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Watari in view of In re Harza 274 F. 2d 669, 671, 124 USPQ 378, 380 (CCPA 1960) in further view of U.S. Patent No. 4,748,567 (hereinafter Sumizawa).

4. As per claim 2, Watari teaches the determination routine unit determines whether or not a relationship in accordance with logic functions is normal (col. 2, lines 43-46).

Watari does not expressly teach the logic function includes a first logic function for operating the control signal based on the predetermined detection signal and a second logic function, for operating a simplified control signal based on the predetermined detection signal.

Sumizawa teaches to a first logic function for operating the control signal based on the predetermined detection signal and a second logic function, for operating a simplified control signal based on the predetermined detection signal (col. 4, lines 33-60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Watari to include a first logic function for operating the control signal based on the predetermined detection signal

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and a second logic function, for operating a simplified control signal based on the predetermined detection signal to enable the controlled means to securely keep operating safely with defective components (col. 12, lines 30-46).

5. As per claim 3, Watari teaches as set forth above wherein the determination routine unit inputs the dummy data to the second logic function to operate a dummy simplified control signal and determines whether or not a relationship between the dummy simplified control signal and an expected value thereof is normal (col. 2, lines 43-46).

6. Claims 4-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Amendment***

7. Applicant's arguments, see Remarks pgs. 19-20, filed 30 October 2006 with respect to the rejection(s) of claim 1 under 35 U.S.C. 102(e) have been fully considered but they are not persuasive.

8. Applicant argues that the prior art fails to teach, "the determination routine unit in the first computer". The examiner respectfully disagrees.

Watari discloses (col. 13, lines 40-45), "Moreover, the main CPU 20 may employ a routine similar to the logic determination process of FIG. 6 to check its subroutines that are used for controlling various devices. In this way, the main CPU 20 can reliably detect if its subroutines are working properly or not and thus, the main CPU 20 can vastly improve the reliability of its control operations."

9. Applicant's arguments, see Remarks pgs. 20-21, filed 30 October 2006 with respect to the rejection(s) claims 2-3 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

Claims 2-3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Watari in view of In re Harza 274 F. 2d 669, 671, 124 USPQ 378, 380 (CCPA 1960) in further view of Sumizawa as set forth above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with



respect to monitoring computer functionality.

U.S. Patent Publication No. 2005/0050387 discloses a microcontroller comprising a central processing unit and a further fault processing unit suitable for performing validation of operations of the central processing unit.

U.S. Patent Publication No. 2003/0171858 discloses an electronic control apparatus which incorporates a plurality of microcomputers and microcomputer monitoring function.

U.S. Patent No. 6,879,891 discloses a method and an arrangement for monitoring a computing element.

U.S. Patent No. 6,804,564 discloses a system for controlling and/or monitoring a control-unit group.

U.S. Patent No. 6,230,094 discloses an electronic control system has an engine control computer and a throttle control computer.

U.S. Patent No. 5,966,305 discloses a control system has a plurality of processors connected in a series order to monitoring the preceding processor.

U.S. Patent No. 6,356,821 discloses an electronic control unit for a vehicle which receives a sensor signal and provides an output signal for controlling operation of the vehicle.

U.S. Patent No. 6,934,874 discloses an electronic control system has a plurality of mutually networked or communicating control units.

U.S. Patent No. 6,628,993 discloses a method and an arrangement mutually monitor control units.

U.S. Patent No. 5,880,568 discloses a method and an arrangement for controlling the drive power of a motor vehicle.

U.S. Patent No. 6,937,933 discloses a method and a device for controlling a drive unit of an internal combustion engine in a vehicle.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Anthony Knight', is positioned above the printed name.

Anthony Knight  
Supervisory Patent Examiner  
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